

PATENT COOPERATION TREATY

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PCT

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

(PCT Article 36 and Rule 70)

REC'D 05 APR 2004

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Applicant's or agent's file reference 29981.61	FOR FURTHER ACTION See Notification of Transmittal of International Preliminary Examination Report (Form PCT/IPEA/416)	
International application No. PCT/US03/22086	International filing date (day/month/year) 12 July 2003 (12.07.2003)	Priority date (day/month/year) 12 July 2002 (12.07.2002)
International Patent Classification (IPC) or national classification and IPC IPC(7): H04M 1/00; H04Q 7/20 and US Cl.: 455/552.1, 426.1		
Applicant SPATIAL WIRELESS, INC.		

1. This international preliminary examination report has been prepared by this International Preliminary Examining Authority and is transmitted to the applicant according to Article 36.

2. This REPORT consists of a total of 2 sheets, including this cover sheet.

☒ This report is also accompanied by ANNEXES, i.e., sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications made before this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions under the PCT).

These annexes consist of a total of 5 sheets.

3. This report contains indications relating to the following items:

- I ☒ Basis of the report
- II ☐ Priority
- III ☐ Non-establishment of report with regard to novelty, inventive step and industrial applicability
- IV ☐ Lack of unity of invention
- V ☒ Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI ☐ Certain documents cited
- VII ☐ Certain defects in the international application
- VIII ☐ Certain observations on the international application

Date of submission of the demand 09 February 2004 (09.02.2004)	Date of completion of this report 24 March 2004 (24.03.2004)
Name and mailing address of the IPEA/US Mail Stop PCT, Attn: IPEA/US Commissioner for Patents P.O. Box 1450 Alexandria, Virginia 22313-1450 Facsimile No. (703) 305-3230	Authorized officer Eliseo Ramos-Feliciano <i>Rugenio Zagan</i> Telephone No. 703-305-3900

Form PCT/IPEA/409 (cover sheet)(July 1998)

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I. Basis of the report**1. With regard to the elements of the international application:***

- ☐ the international application as originally filed.
- ☒ the description:
pages 1-11 as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the claims:
pages NONE, as originally filed
pages NONE, as amended (together with any statement) under Article 19
pages 12A-15B, filed with the demand
pages NONE, filed with the letter of _____.
- ☒ the drawings:
pages 1-8, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.
- ☐ the sequence listing part of the description:
pages NONE, as originally filed
pages NONE, filed with the demand
pages NONE, filed with the letter of _____.

2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language _____ which is:

- ☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).
- ☐ the language of publication of the international application (under Rule 48.3(b)).
- ☐ the language of the translation furnished for the purposes of international preliminary examination (under Rules 55.2 and/or 55.3).

3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the international preliminary examination was carried out on the basis of the sequence listing:

- ☐ contained in the international application in printed form.
- ☐ filed together with the international application in computer readable form.
- ☐ furnished subsequently to this Authority in written form.
- ☐ furnished subsequently to this Authority in computer readable form.
- ☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.
- ☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

4. ☒ The amendments have resulted in the cancellation of:

- ☒ the description, pages NONE
- ☒ the claims, Nos. 11
- ☒ the drawings, sheets/fig NONE

5. ☐ This report has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).**

* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report since they do not contain amendments (Rules 70.16 and 70.17).

** Any replacement sheet containing such amendments must be referred to under item 1 and annexed to this report.

INTERNATIONAL PRELIMINARY EXAMINATION REPORT

International application No.
PCT/US03/22086

V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

1. STATEMENT

Novelty (N)	Claims <u>1-10, 12-24</u>	YES
	Claims <u>NONE</u>	NO
Inventive Step (IS)	Claims <u>1-10, 12-24</u>	YES
	Claims <u>NONE</u>	NO
Industrial Applicability (IA)	Claims <u>1-10, 12-24</u>	YES
	Claims <u>NONE</u>	NO

2. CITATIONS AND EXPLANATIONS

Claims 1, 8, 10, 16, 21, and 24 meet the criteria set out in PCT Article 33(2)-(3), because the prior art does not teach or fairly suggest a method and corresponding apparatus including all claimed steps for the method or all claimed components for the apparatus in combination.

Claims 2-7, 9, 12-15, 17-20, and 22-23 meet the criteria set out in PCT Article 33(2)-(3), for the reasons set forth above, because they depend on *claims 1, 8, 10, 16, 21*, respectively.

Claims 1-10 and 12-24 meet the criteria set out in PCT Article 33(4), and thus have industrial applicability because the subject matter claimed can be made or used in industry.

NEW CITATIONS

NONE

WHAT IS CLAIMED

1. A method for transferring information from a network via an interface incompatible with the network to a mobile device that is compatible with both the network and the interface, the method comprising:
 - 5 establishing a communication channel between the mobile device and a switch, wherein the switch is accessible to the network and is adapted to send and receive messages compatible with both the network and interface;
 - 10 receiving information from the network;
 - inserting the information into a first message compatible with the interface; and
 - transferring the first message to the mobile device via the interface.
2. The method of claim 1 further comprising extracting the information from the first message to recover the inserted information.
3. The message of claim 2 further comprising processing the extracted information.
4. The method of claim 1 wherein establishing the communication channel occurs prior to authenticating the mobile device in the network.
5. The method of claim 4 further comprising:
 - 20 receiving a second message from the mobile device via the interface, wherein the second message is compatible with the interface; and
 - 25 converting the second message received via the interface into information compatible with the network.
6. The method of claim 5 further comprising inserting information compatible with the network into the second message.
7. The method of claim 1 further comprising identifying a preselected field in the first message, wherein the information is inserted into the preselected field.
8. A method for manipulating data by a mobile station, wherein the mobile station is compatible with at least first and second incompatible telecommunications protocols, the method comprising:
 - 35 receiving a first message using the first protocol;

identifying information in the first message compatible with second protocol;
extracting the identified information from the first message; and
processing the extracted information using the second protocol.

5 9. The method of claim 8 further comprising:
 inserting information compatible with the second protocol into a second message
compatible with the first protocol; and
 transmitting the second message via an air interface using the first protocol.

10 10. A system for enabling communications between a mobile unit and a
network over an air interface, wherein the network and interface are based on first and second
incompatible protocols, respectively, and wherein the mobile unit is compatible with both
protocols, the system comprising:
 a call controller adapted for using the first protocol;
15 a mobility manager adapted for using the first protocol and accessible to the call
controller;
 at least a portion of a base station adapted for using the second protocol and
accessible to the interface; and
 a message converter accessible to the call controller and the base station portion,
20 wherein the message converter is adapted to convert information compatible with the first or
second protocol into information compatible with the other protocol.

 11. The system of claim 10 further wherein functionality associated with the call
controller and the mobility manager is inherited from the network, and wherein functionality
25 associated with the base station portion is inherited from the interface.

12. The system of claim 10 wherein the message conveyed includes a plurality of instructions, including:

an instruction for receiving a first message based on the first protocol from the network;

an instruction for inserting the first message into a second message compatible the second protocol;

an instruction for receiving a third message based on the second protocol from the interface; and

an instruction for extracting a fourth message compatible with the first protocol from the third message.

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13. The system of claim 12 further comprising an instruction for converting the third message into a fifth message compatible with the first protocol if the third message does not contain the fourth message.

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14. The system of claim 10 wherein the first protocol is a Global System for Mobile communications (GSM) protocol and wherein the second protocol is a code division multiple access (CDMA) protocol.

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15. The system of claim 10 wherein the second protocol is a Global System for Mobile communications (GSM) protocol and wherein the first protocol is a code division multiple access (CDMA) protocol.

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16. A method for transferring GSM-based information between a GSM communications system and a GSM/CDMA compatible mobile device via a CDMA interface, the method comprising:

establishing a CDMA channel between the mobile device and a switch, wherein the switch is accessible to the GSM network and adapted to send and receive both GSM and CDMA messages;

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receiving GSM-based information from the GSM network;

inserting the information into a CDMA message; and

transferring the CDMA message to the mobile device via the CDMA interface.

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17. The method of claim 16 wherein establishing the CDMA channel occurs prior to authenticating the mobile device in the GSM network.

18. The method of claim 16 further comprising:

receiving CDMA information from the mobile device; and
converting the CDMA information into GSM information for compatibility with the GSM network.

5 19. The method of claim 16 wherein the CDMA message is an "ADDS Deliver" message, and wherein inserting the GSM information into the CDMA message includes identifying a predetermined field in the "ADDS Deliver," wherein the predetermined field is used to store the GSM information.

10 20. The method of claim 16 further comprising:
extracting the GSM information from the CDMA message; and
processing the extracted GSM information.

15 21. A method for transferring CDMA-based information between a CDMA communications system and a GSM/CDMA compatible mobile device via a GSM interface, the method comprising:

establishing a GSM channel between the mobile device and a switch, wherein the switch is accessible to the CDMA network and adapted to send and receive both GSM and CDMA messages;

20 receiving CDMA-based information from the CDMA network;
inserting the information into a GSM message; and
transferring the GSM message to the mobile device via the GSM interface.

25 22. The method of claim 21 wherein establishing the GSM channel occurs prior to authenticating the mobile device in the GSM network.

 23. The method of claim 21 further comprising:
receiving GSM information from the mobile device; and
converting the GSM information into CDMA information for compatibility with the
30 CDMA network.